## DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-002656

Address: 333 Burma Road **Date Inspected:** 26-May-2008

City: Oakland, CA 94607

**Project Name:** SAS Superstructure **OSM Arrival Time:** 1400 **OSM Departure Time:** 2300 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Chen Chih-Ming, An Qingxiang CWI Present: Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No

Yes No N/A **Delayed / Cancelled:** 

**Bridge No:** 34-0006 **Component:** OBG side and bottom panels and tower skin p

## **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG new assembly bay 2

QA observed ZPMC qualified welding personnel perform FCAW on floor beam connection plates SSD13-PP023-137 and SSD13-PP023-132 following the guide lines of WPS# WPS-B-T-2233-TC-U4b-F. QC monitored the welding process continuously throughout the evening. The welding parameters as measured with Quality Controls calibrated instruments appeared to be in conformance with the posted WPS's and were as follows:

Volts: 24 Amps: 223 Travel speed: 106mm/min

QA observed ZPMC qualified welding personnel perform SAW Critical Weld Repair (CWR) on side panel SP-025A to SP-017A joint# SEG-13A-002 following the guide lines of approved CWR procedure B-CWR098 and WPS# WPS-345-SAW-1G (1F)-FCM-repair-1. QC monitored the welding process continuously throughout the evening. The welding parameters as measured with Quality Controls calibrated instruments appeared to be in conformance with the posted WPS's and were as follows:

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Volts: 30 Amps: 510 Travel speed: 450mm/min

Other general observations include ZPMC personnel grinding side and bottom panels and weld bevel prep.

New Tower Bay 1

QA observed ZPMC qualified welding personnel perform SAW welding on skin plate joint# SSD1-SA178C/D-17, 11A, 15, 10A, 8, 7A, 5, and 25A following the guide lines of approved WPS# WPS-B-T-2311-B-P-3 and WPS-B-T-2211-B-U3b. QC monitored the welding process continuously throughout the evening. The welding parameters as measured with Quality Controls calibrated instruments appeared to be in conformance with the posted WPS's and were as follows:

Amps: 658 Travel speed: 635mm/min Volts: 32.4

QA observed ZPMC qualified welding personnel back gouging tower skin plate joints SSD1-SA178C/D-11B, 16, 7B and 5B.

New Tower Bay 2

QA observed ZPMC qualified welding personnel tack welding on tower skin plate joint# ESD1-SA77A/E-45B. QA noted that no other welding was being performed in this bay at the time QA was present.

Other general observations in the New Tower bays include ZPMC tack welding tower skin plates, weld bevel preparation, flame straightening, CNC parts cutting, hole drilling and grinding.



#### **Summary of Conversations:**

Only general conversations were held between QA and QC concerning this project.

# **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Patrick Lowry (858)-344-2712, who represents the Office of Structural Materials for your project.

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**Inspected By:** Hall,Steven Quality Assurance Inspector **Reviewed By:** Cuellar,Robert QA Reviewer